operations bleeding was heavy, but all were successful. These authors also quote six reports of splenectomy in von Willebrand's disease. Only the one case mentioned above resulted in a fatality. (It should be noted that splenectomy has no beneficial effect on this syndrome.)

Horler and Witts (1958), in a series of 20 patients, record one example of a successful gastrectomy for haemorrhage and another of an uneventful nasal polypectomy. One patient bled heavily from an antrum operation and mastoidectomy, and later at appendicectomy; subsequently a gastrectomy was attempted but abandoned because of wound-edge bleeding and visceral haematomata. Another patient, after bleeding heavily as a result of tonsillectomy, underwent an uncomplicated appendicectomy. The patient bled heavily after hysterectomy for menorrhagia. Thus in eight operations on five patients only three were uncomplicated by haemorrhage.

This variation in bleeding tendency at operation has also been noted by Estren *et al.* (1946). In one of their patients laparotomy was abandoned because of profuse haemorrhage from all cut surfaces, yet nine months later this patient underwent abdominal hysterectomy without any abnormal loss of blood. This variability in bleeding tendency is a striking feature in von Willebrand's disease, and occasionally the bleeding-time may return to normal. Irvine and Jones (1957) suggest that advantage should be taken of this fact and elective surgery be performed when the bleeding-time is normal or near normal. It is, however, dangerous to assume that the finding of a normal bleeding-time indicates normal haemostatic function in this syndrome.

Summary

The case is described of a patient with von Willebrand's disease in whom rupture of the ovarian follicle twice led to intraperitoneal haemorrhage.

The nature of this syndrome and its management when surgery is called for are described.

We are indebted to Mr. A. Elliot-Smith and Professor L. J. Witts for permission to publish details of this case, and to Dr. R. Earl and Mr. Normal Pitt, of Redhill County Hospital, for so generously providing the clinical and laboratory data of her admission to that hospital.

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In Victoria the State Cabinet has approved in principle a Bill to allow doctors to give life-saving blood transfusions to children if their parents refuse consent. Similar legislation is already in force in some other Australian States. The Government's action follows the death of a baby late last year after its father refused on religious grounds to consent to a blood transfusion being given to the child. (*Radio Australia News*, April 4.)

Medical Memoranda

Photosensitivity Caused by Promethazine

Promethazine hydrochloride (" phenergan ") is related to the phenothiazine group of drugs, and is chemically very similar to chlorpromazine, a drug which has been reported as causing both severe photosensitivity (Cahn and Levy, 1957) and contact dermatitis (Seville, 1956). Promethazine is one of the more potent antihistamines, and for that reason is widely prescribed both for its antiallergic properties and for its sedative effect.

Tzanck *et al.* (1951) published two cases of severe solar dermatitis after the ingestion of phenergan tablets prescribed for contact dermatitis, and Sidi *et al.* (1955) reported on a large number of cases of dermatitis following exposure to summer sunshine after the topical application of phenergan cream. In many of these cases the cream had been given for mild sunburn, and the authors estimated that 50% of all cases of eruptions due to topical medicaments seen by them in 1953 were caused by phenergan cream.

The hot summer of 1959 in the British Isles resulted in many casualties due to heat and sunburn, and three further cases of severe solar dermatitis after the ingestion of promethazine are described.

CASE 1

A housewife aged 28 was 16 weeks pregnant at the time. She had a strong family history of eczema and had herself suffered from atopic eczema of the right wrist and left leg since the age of 14. In August, 1959, she was given phenergan tablets (25 mg. t.i.d.) by her doctor as part of the treatment for this eczema, and a few days later was exposed to hot sunshine. Almost immediately she developed a severe dermatitis of the exposed areas—face, neck, arms, and hands, and both legs below her dress.

The condition was severe enough to warrant admission to hospital, where she was treated with triamcinolone 4 mg. q.i.d., potassium permanganate baths twice daily, and local application of a hydrocortisone alcoholic spray. She was discharged after eight days in hospital, but two weeks later was seen again with a recurrence of the dermatitis after a further prolonged exposure to hot sunshine. Triamcinolone again successfully suppressed the eruption and she was further treated with chloroquine phosphate (250 mg. b.d.) in an attempt to counteract the inflammatory action of sunshine.

When last seen in February, 1960, the eczema was controlled, but sitting by a hot fire tended to cause irritation in the areas previously affected. She had no previous history of photosensitivity and had been able to sunbathe freely. As a child she had suffered from " growing pains " in the legs.

CASE 2

A riding-school mistress aged 40 had no previous history of photosensitivity, but had been investigated three years previously by an allergist for an eczematous rash on the legs, and was found to be sensitive to human hair and horse dander. She had completed a course of specific desensitization to these antigens, but had a slight recurrence of this rash on the legs during a hot period in the early summer of 1958. The rest of that summer had been cold and wet, and she had remained free from further eruptions. In August, 1959, she had a further slight relapse during a spell of hot

weather and was given oral promethazine (phenergan 25 mg. t.i.d.). Four days later, during which time she had been riding in the hot sunshine, she developed a severe weeping eczematous eruption of the face, neck, arms, and hands. Her riding-breeches protected her legs.

She was treated at home with oral triamcinolone, 4 mg. t.i.d., and with topical hydrocortisone alcoholic spray. Her recovery was delayed by a severe furunculosis of the neck and external auditory meatuses which necessitated reduction of the oral corticosteroids and treatment with tetracycline. Not long after her recovery from this episode she was again exposed to hot sunshine while sunbathing and wearing only a bikini type of swim-suit. An immediate recurrence of the dermatitis over the whole body, except for the small area covered by the swim-suit, was treated successfully with the same drugs as previously and with the addition of tetracycline six-hourly to prevent furunculosis. By this time the persistent nature of this condition was recognized and she was given hydroxychloroquine sulphate ("plaquenil" 200 mg. b.d.) in an attempt to prevent further relapses during the hot summer.

Her skin remained clear until February, 1960, when, despite the cold and sunless weather, she had another, less severe, relapse. This again affected her entire body except for the small areas previously covered by her swim-suit, and is considered to have been brought on by sitting in front of a hot fire. She had not been taking antimalarials during the previous three winter months.

She did not recollect having taken phenergan tablets at any time previously, and had never before been affected by hot sunshine. She had had an attack of subacute rheumatism eight years previously.

CASE 3

A plumber aged 32 had no previous history of photosensitivity. While on holiday at the seaside early in August, 1959, he had been stung by a wasp, and, as his hand became swollen, he had consulted a doctor, who gave him six turquoise-blue tablets, later confirmed to have been phenergan. For the next four days—the last of his holiday—he swam and sunbathed in the hot sunshine, and on the fifth day he developed a moderately severe dermatitis of the whole body except for the area covered by his trunks. This was not as severe as in Cases 1 and 2, but it was accompanied by fever and rheumatic-type pains in the wrist and ankle-joints. His E.S.R. was 25 mm. Hg in the first hour (Westergren). He had a past history of two attacks of subacute rheumatism. This latest attack was treated with prednisolone 5 mg. eight-hourly, soluble aspirin 10 gr. (600 mg.) every six hours, and the topical application of hydrocortisone alcoholic spray. The dermatitis and arthritis rapidly subsided but returned two weeks later after a further exposure to sunshine. Unfortunately a follow-up was not possible, as he emigrated soon afterwards to Australia, where the heat-wave of January, 1960, is presumed to have caused him some distress.

COMMENT

These three patients had not previously suffered from any form of photosensitivity, though two had histories of eczematous eruptions. They did not recollect having received promethazine (fortunately the turquoise-blue colour of phenergan tablets is easily recognizable), and none had taken any other drugs immediately prior to the appearance of the eruption which occurred soon after the ingestion of promethazine and exposure to hot sunshine. It is therefore reasonable to assume that this drug was responsible for the lesions described.

All three cases were of the contact eczematous type in the classification of solar dermatitis by Lamb *et al.* (1950). These authors also report evidence of adrenal depression in solar dermatitis as shown by a decreased 17-ketosteroid excretion, and this evidence, combined with the efficacy of corticosteroids and antimalarials in the treatment of this condition, suggests that photosensitivity induced by promethazine is, like lupus erythematosus, a cutaneous manifestation of the rheumatic diathesis. All three cases had previously suffered from some form of subacute rheumatism, and in one (Case 3) a further attack was precipitated by the exposure to hot sunshine after the ingestion of promethazine.

The mechanism by which promethazine initiates this disorder in persons with a rheumatic diathesis is not clear. Adler (1942) suggests a connexion between liver dysfunction and photosensitivity, and though this factor might account for the cases of solar dermatitis reported after the ingestion of chlorpromazine, there is no evidence that promethazine is similarly toxic to the liver. In the light-sensitivity associated with congenital porphyria previous liver damage is often present, but porphyrin excretion was not looked for in these patients, as none had any previous history of light sensitivity, and none had any other symptoms suggestive of an attack of acute porphyria that might have been precipitated by the promethazine. Adamson (1952) made the interesting observation that the initial attacks of any contact dermatitis are usually precipitated by conditions of heat, either solar or artificial. In this event the ingested drug behaves similarly to the topical application of phenergan cream described by Sidi *et al.* (1955). Possibly promethazine is directly toxic to the adrenal cortex in some individuals.

Sidi *et al.* stress the chronic nature of the photosensitivity in this condition and state that it may continue for months or even years after the initial sensitization, with relapses at every exposure to sunshine or even to bright light. The subsequent history of Cases 1 and 2 emphasize this chronic tendency. These people had relapses even in winter when sitting by a hot fire.

Whatever the cause, it would seem advisable, during hot weather, to prescribe some antihistamine other than promethazine to persons who are known to suffer from eczema in any form or who have a tendency towards rheumatism. It is not unlikely that many cases of eczema of the face and neck, at present diagnosed as contact dermatitis of unknown cause, would be found on inquiry to have been taking promethazine and who were subsequently exposed to a hot fire or to sunshine.

I thank Dr. Ian Martin-Scott for permission to include details of Case 1, admitted to the West Herts Hospital, Hemel Hempstead, under his care, and for advice in the presentation of this paper.

R. G. D. NEWILL, M.B., B.S.,
General Practitioner,
Chipperfield, Hertfordshire.

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